DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

Interim Final 2/5/99

RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA725)

Current Human Exposures Under Control

RCRA RECORDS CENTER
FACILITY Ahlstrom Dexter Main Plant
I.D. NO. CTD 983871914
FILE LOC. R-13
OTHER RPMS # 3967

Facility Name: Ahlstrom (Dexter)
Facility Address: Canal Bank, Windsor Locks, CT
Facility EPA ID #: CTD983871914

1. Has **all** available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

   ✓ If yes - check here and continue with #2 below.

   ____ If no - re-evaluate existing data, or

   ____ if data are not available skip to #6 and enter"IN" (more information needed) status code.

BACKGROUND

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

Definition of "Current Human Exposures Under Control" EI

A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Current Human Exposures Under Control" EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)
Page 2

2. Are groundwater, soil, surface water, sediments, or air media known or reasonably suspected to be **"contaminated"**[1] above appropriately protective risk-based "levels" (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

	Yes	No	?	Rationale / Key Contaminants
Groundwater	✓			1,1,1-TCA intermittently above MCL, CS2 (hostshuhd) still detectible
Air (indoors)[2]		✓		Sampling conducting in building adjacent to spill area (toluene) << PEL①
Surface Soil (e.g., <2 ft)	✓			lead
Surface Water		✓		No constituents detected above CT RSR SWPC in groundwater②
Sediment	✓			toluene, lead, silver in S-03 (traceway 3)
Subsurf. Soil (e.g., >2 ft)	✓			TPH, lead
Air (outdoors)		✓		soil gas survey non detect③

____ If no (for all media) - skip to #6, and enter "YE," status code after providing or citing appropriate "levels," and referencing sufficient supporting documentation demonstrating that these "levels" are not exceeded.

✓ If yes (for any media) - continue after identifying key contaminants in each "contaminated" medium, citing appropriate "levels" (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

____ If unknown (for any media) - skip to #6 and enter "IN" status code.

Rationale and Reference(s): ① Sampling conducted in 1995 in the pulpmill after a building modification indicated toluene < 5 ppb the PEL for toluene is 50 ppm. the pulpmill is immediately adjacent to the toluene release area. See attached laboratory report.

② CT RSR SWPC = CT Remediation Standard Regulation Surface Water Protection Criteria

③ reported in: "Results of Site characterization Program, 1994

See also Annual RCRA Groundwater Monitoring Reports and the RFA Final Report April, 1995

Footnotes:

[1] "Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based "levels" (for the media, that identify risks within the acceptable risk range).

[2] Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

3. Are there **complete pathways** between "contamination" and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table

Potential **Human Receptors** (Under Current Conditions)

"Contaminated" Media	Residents ①	Workers	Day-Care ②	Construction ③	Trespassers ④	Recreation ④	Food[3] ⑤
Groundwater ⑥	No	No	No	No			No
Air (indoors)	No	No	No				
Soil (surface, e.g., <2 ft) ⑦	No	No	No	No	No	No	No
Surface Water	No	No			No	No	No
Sediment ⑧	No	No			No	No	No
Soil (subsurface e.g., >2 ft) ⑨				No			No
Air (outdoors)	No	No	No	No	No		

Instructions for Summary Exposure Pathway Evaluation Table:

1. Strike-out specific Media including Human Receptors' spaces for Media which are not "contaminated") as identified in #2 above.

2. enter "yes" or "no" for potential "completeness" under each "Contaminated" Media -- Human Receptor combination (Pathway).

Note: In order to focus the evaluation to the most probable combinations some potential "Contaminated" Media - Human Receptor combinations (Pathways) do not have check spaces ("___"). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary.

✓ If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter "YE" status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).

____ If yes (pathways are complete for any "Contaminated" Media - Human Receptor combination) - continue after providing supporting explanation.

____ If unknown (for any "Contaminated" Media - Human Receptor combination) - skip to #6 and enter "IN" status code

Rationale and Reference(s): See attached sheets

[3] Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

Pathway Footnotes

1) Site is located adjacent to the Connecticut River and cutoff on other sides by a canal. It is separated from any residential land uses.

2) There is no day-care facility on-site.

3) All construction work will pass through the Health, Safety, and Environmental Officer at the site for review and establishment of appropriate controls to limit exposure to any hazards as described in letter dated August 5, 2003 from J. Michael Joyce, Director Health, Safety, and Environment at Ahlstrom to Ernest Waterman at USEPA.

4) The site is cut off from mainland by a canal and a fence, with access controlled by security guards. The riverbank is steep along developed portions of the site. Trespass would have to be by boat and is unlikely to be frequent, if it occurs at all. There are no recreational areas in the developed portion of the site. Trespass into the undeveloped portions for recreation is unlikely given the setting described above. Fishing from boats does occur in the Connecticut River adjacent to the site.

5) There is no food production on-site (some of the facility's products are subsequently used in food production at other sites but there is no pathway for site releases to contaminate these products. The constituents of concern at the site do not tend to bio-accumulate and are highly unlikely to cause a food chain risk in the Connecticut River.

6) Ground water flow on the site is reasonably well understood and is definitely focused toward the Connecticut River. There is no use of ground water on-site and now wells other than monitoring wells.

7) All areas with surface soil contamination are now paved or covered with several feet of clean fill. Visually observed by Ernest Waterman on a site walkover August 5, 2003.

8) The sediments in raceways and the canal are generally inaccessible. There are only limited pockets of sediment in the Connecticut River adjacent to the site and much exposed bedrock. This, with the inaccessibility of this shoreline, should prevent contact with sediments. The available, limited sediment data does not indicate levels which would drive unacceptable human health risk in the sediments of the Connecticut River.

4 Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be **"significant"**[4] (i.e., potentially "unacceptable" because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable "levels" (used to identify the "contamination"); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable "levels") could result in greater than acceptable risks)?

____ If no (exposures can not be reasonably expected to be significant (i.e., potentially "unacceptable") for any complete exposure pathway) - skip to #6 and enter "YE" status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

____ If yes (exposures could be reasonably expected to be "significant" (i.e., potentially "unacceptable") for any complete exposure pathway) - continue after providing a description (of each potentially "unacceptable" exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

____ If unknown (for any complete pathway) - skip to #6 and enter "IN" status code

Rationale and Reference(s):_____

[4] If there is any question on whether the identified exposures are "significant" (i.e., potentially "unacceptable") consult a human health Risk Assessment specialist with appropriate education, training and experience.

5 Can the "significant" **exposures** (identified in #4) be shown to be within **acceptable** limits?

_____ If yes (all "significant" exposures have been shown to be within acceptable limits) - continue and enter "YE" after summarizing and referencing documentation justifying why all "significant" exposures to "contamination" are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).

_____ If no (there are current exposures that can be reasonably expected to be "unacceptable")- continue and enter "NO" status code after providing a description of each potentially "unacceptable" exposure.

_____ If unknown (for any potentially "unacceptable" exposure) - continue and enter "IN" status code

Rationale and Reference(s):_____

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)

6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

✓ YE - Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the Ahlstrom (Dexter) facility, EPA ID # CTD983871914, located at Canal Bank, Windsor Locks, CT under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

___ NO - "Current Human Exposures" are NOT "Under Control."

___ IN - More information is needed to make a determination.

Completed by (signature) [signature] Date 8-20-2003
(print) Ernest R.P. Waterman
(title) Geologist

Supervisor (signature) [signature] Date 9/22/03
(print) Matthew R. Hoagland
(title) Section Chief
(EPA Region or State) Reg. I

Locations where References may be found:

U.S. EPA Records Center (Region I)
One Congress Street
Suite 1100
Boston, MA 02114

Contact telephone and e-mail numbers

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FINAL NOTE: THE HUMAN EXPOSURES EI IS A QUALITATIVE SCREENING OF EXPOSURES AND THE DETERMINATIONS WITHIN THIS DOCUMENT SHOULD NOT BE USED AS THE SOLE BASIS FOR RESTRICTING THE SCOPE OF MORE DETAILED (E.G., SITE-SPECIFIC) ASSESSMENTS OF RISK.